



# ***Individual Armor Laboratory***

## ***Overview:***

The **Individual Armor Laboratory** supports the development of integrated headgear and body armor as well as a variety of special application protective products. The lab is equipped to perform computer aided design and engineering, helmet impact testing, headset sound attenuation analysis, and prototype fabrication.

Using **CAD/E equipment**, Natick engineers and technologists are able to design new protective products for the purpose of evaluation and demonstration. Whether the items are built in-house or under contract, the CAD/E capability enables a streamlined design and fabrication process.

The **3-D Digitizer** is used to capture the 3-D data points necessary to define a solid object. Using the Digitizer, engineers and technologists are able to construct a 3-D model which can be imported and manipulated by CAD/E software. This technology is particularly useful for items that have complex shapes and geometries.

The **Helmet Impact Tester** is an ANSI standard mono-rail impactor capable of simulating crash conditions for head impacts. The impact tester is used to assess new impact protective configurations in support of headgear research and development. Helmets are simply mounted to the test headform, raised to the required height (and corresponding drop velocity), and dropped onto a steel anvil. Velocity and deceleration measurements are taken to quantify the impact protective qualities of the helmet system.

## ***Point of Contact:***

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rev 8-12-99

